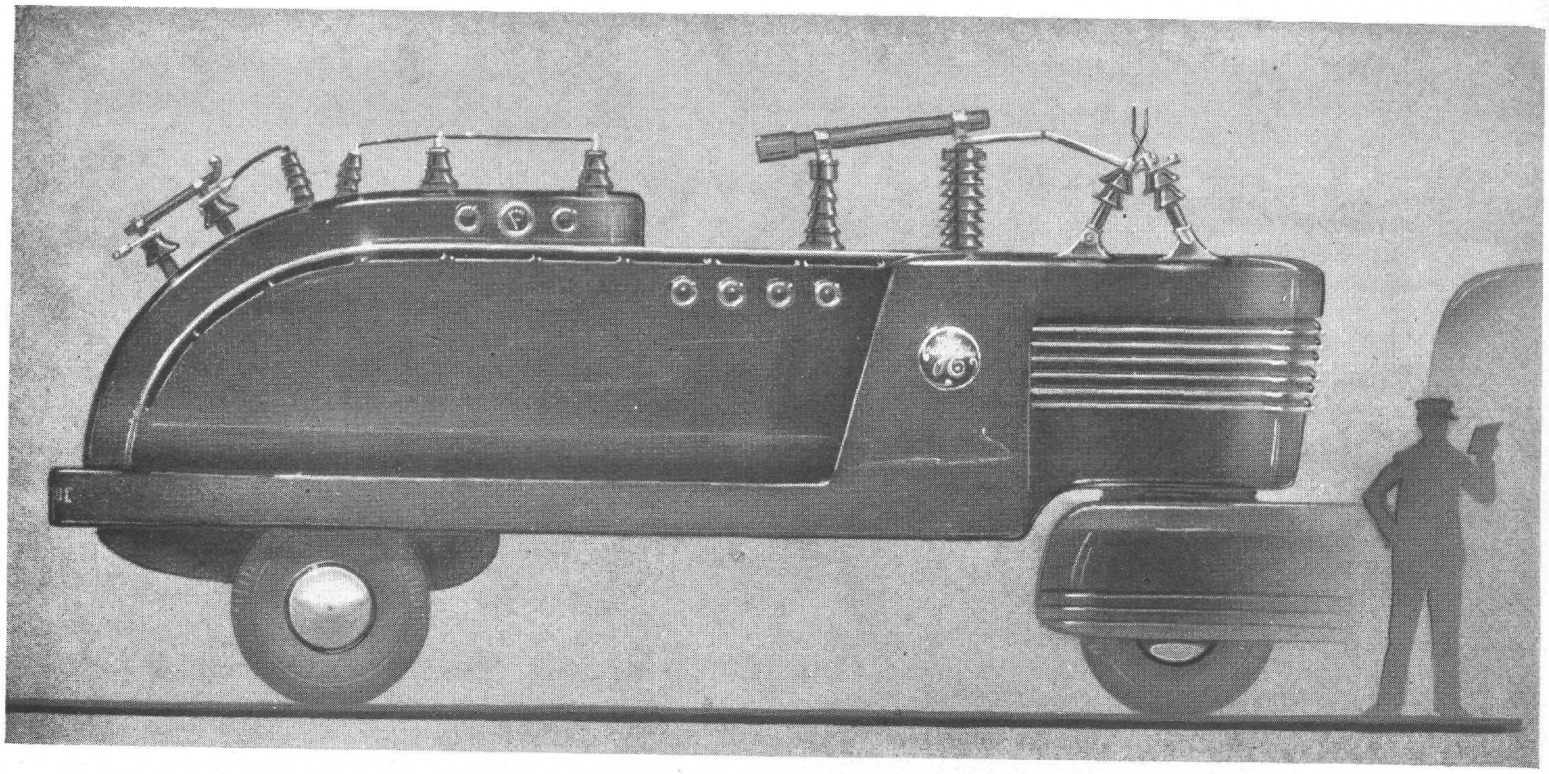
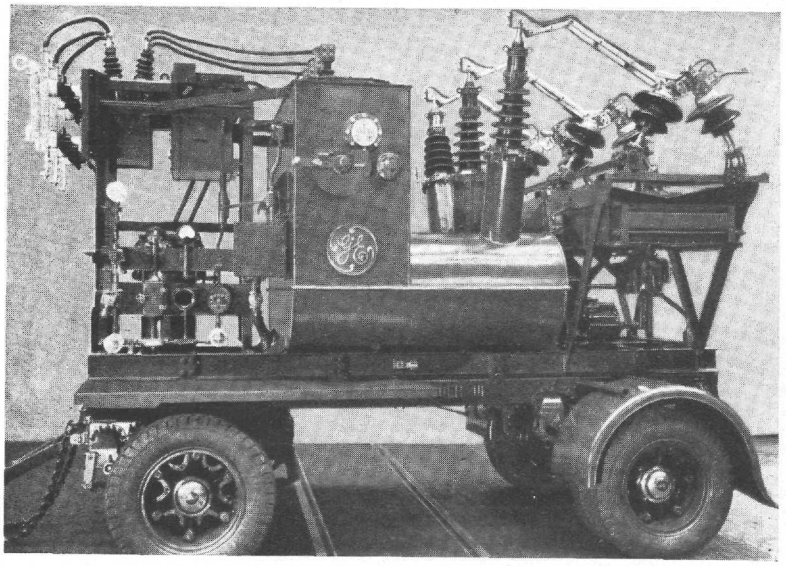


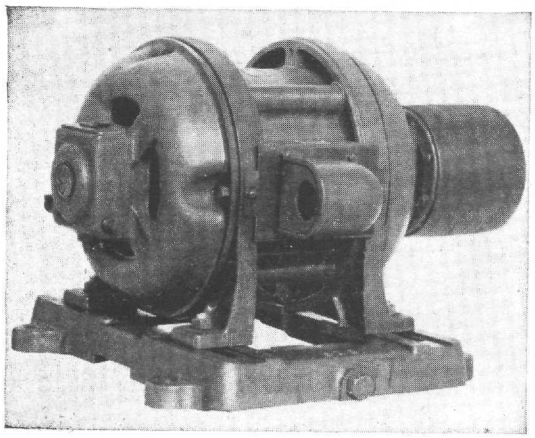


(Above)—Metamorphosis of mobile substations: Old substation, referred to as a "breadboard" model, and the envisioned one. Speed is implied in every line of the designer's conception of the mobile substation of the future.

Apparatus Gets a Shot in the Arm

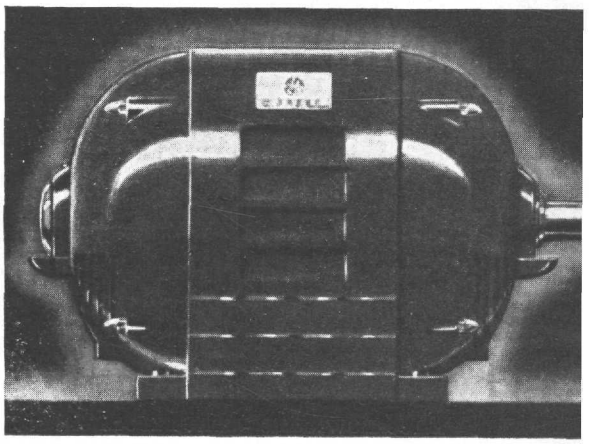
Industrial Machinery of the Future

—All Illustrations Courtesy of General Electric

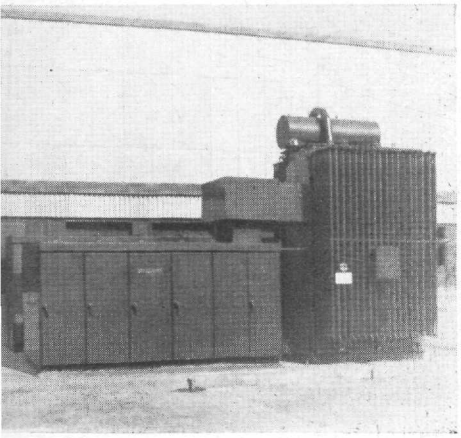


MOTORS

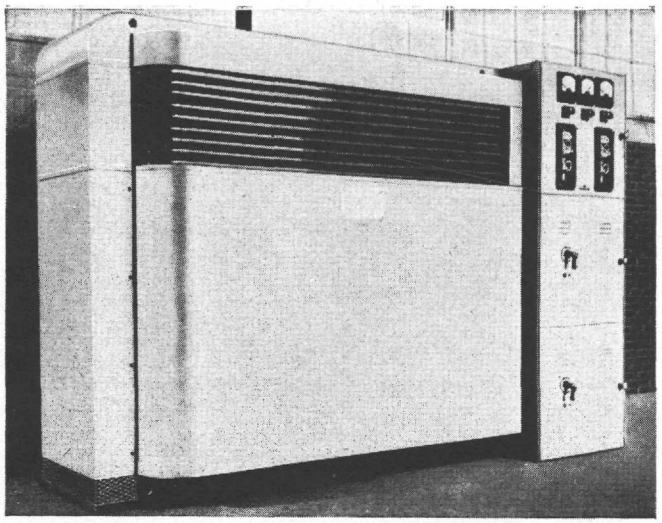
The old motor was a very good machine mechanically, but it needed eye appeal. You might compare it to the ordinary dray-horse. The new Tri-Clad motor, on the other hand, is a thoroughbred. It is a sleek, powerful machine, whose one-piece cast-iron frame and end shield protect the vital parts from external blows, falling objects or dripping liquids.



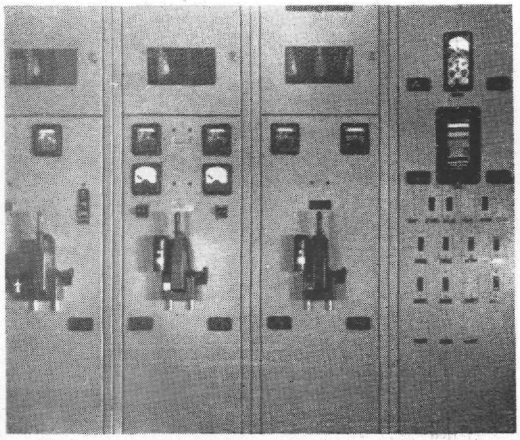
UNIT SUBSTATIONS

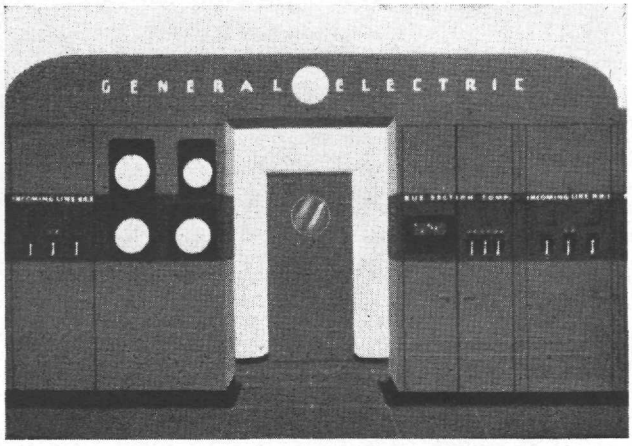


Unit substation before and after the industrial designers went to work on it. The lines of the "after" model are cleaner and express unity. The tank that used to surmount the transformer is now placed in a cubicle next to the transformer.



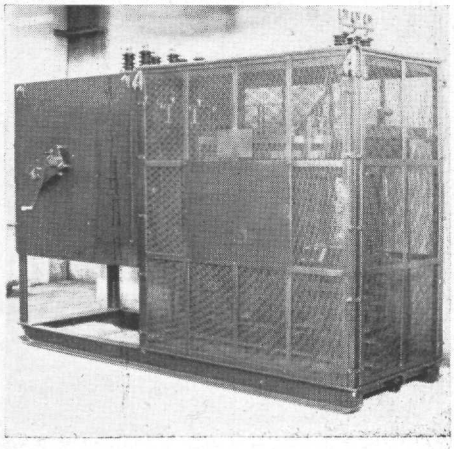
PUMPING-STATION CONTROL BOARD





To find the proper dial or switch on the old-style pumping station control board required concentration, a good memory. Operation of the control board of the new Schenectady pumping station is much easier, because color and shading are used to produce a restful, legible visual field. Dials are located on the dark-gray, and all of them are black with white pointers and figures. The entire face of the board is unified by paint.

DRY-TYPE TRANSFORMER



The dry-type transfomer of the past was much larger and heavier than it should have been. For protection, the transformer itself was enclosed in a steel-mesh cage. Gradually, over a period of years the cage grew larger. Then the industrial designer stepped in. A new model was designed. Result: improved appearance, reduction in weight, cost and materials used. The louvers also provide better ventilation.